IN THE SPECIFICATION

Please amend the following paragraphs as indicated.

[21] The air induction components or shells thereof are permanently attached to one another along a laser weld joint ~~area~~, shown generally at 16. First, the shells 12, 14 are attached to each other to form the air induction manifold 10. Then the air induction manifold 10 is mounted to a vehicle engine 18 to distribute clean air to the different cylinders of the engine 18.

[22] It should be understood that the air induction manifold or system 10 can include additional air induction components and that these additional components can also be joined or attached to each other, as needed, with laser welding in a manner similar to that detailed below. Further, while only one laser weld joint ~~area~~ 16 is shown, multiple laser weld joints ~~areas~~ may be needed to attach the multiple shells together.

[27] The first shell 12 includes a first clamping flange 80 that extends transversely to the first extension 22. The second shell 14 includes a second clamping flange 82 that extends transversely to the second extension 52. The first clamping flange 80 receives a first clamp member 84 and the second clamping flange 82 receives a second clamp member 86. The clamp members 84, 86 exert a clamping force CF that moves the first and second extensions 22, 52 toward each other along a first path. This moves the first 30 and second 60 taper locking surfaces into engagement with each other. The first 30 and second 60 taper locking surfaces cooperate with each other to force the first 28 and second 58 laser weld surfaces into abutting engagement with each other. The first 30 and second 60 taper locking surfaces move the first 28 and second 58 laser weld surfaces along a second path that is transverse to the first path. A laser 90 directs a laser beam 92 toward the first 28 and second 58 laser weld surfaces to form the laser weld joint 16.

[29] This 0.1 mm gap 98 can be achieved by various geometric configurations. In one example, the distance along surface 72 from the ledge 68 to the flange 82 is 2.22 mm, as is the distance along surface 36 from ledge 32 to the wall of main body portion 20. The vertical distance along surface ~~52~~ 66 from ledge 62 to the wall of main body portion 50 is

7.68 mm and the vertical distance along surface 42 from ledge 38 to flange 80 is 7.78 mm, which is 0.1 mm longer than the distance along surface ~~52~~66. Thus, when the shells 12, 14 are brought together, the .1 mm difference results in the gap 98 of 0.1 mm between ledges 62 and 32.

[30] The significance of the gap 98 is that when the shells 12, 14 are brought together, the second extension 52 will not contact with the first extension 22 prior to contact between the taper locking surfaces 30, 60. If initial contact is first made between the extensions 22, 52 then the clamping force CF causes the extension 52 to buckle, which destroys the interference fit between the weld surfaces 28, 58. ~~This~~ Thus, maintaining the gap 98, in combination with the interference fit between weld surfaces 28, 58 generated by initial contact between the tapered locking surfaces 30, 60, is important to achieving a successful weld.

[31] There is also a gap 100 between surface 44 of extension 22 and surface 74 of extension 52, caused by the flat section 45 on the lower end of the partially curvilinear surface 44 not mating with the fully curvilinear surface 74. This gap 100 is necessary to assure that the initial contact is between surfaces 30 and 60 and between ~~surfaces~~ ledges 38 and 68.

[33] In Figure 2A, the clamp members 84, 86 move the first 22 and second 52 wall extensions toward each other in a generally vertical direction to define the first path. The taper locking surfaces 30, 60 move the flanges ~~22, 53~~80, 82 in a generally lateral direction to define the second path. It should be understood that the terms vertical and lateral are merely descriptive terms used to describe the direction of forces as shown in the Figures.

[36] The configuration shown in Figures 2A and 2B is the preferred embodiment, whereby surfaces 36 and 52 are inner wall surfaces of the component and surfaces 42 and 72 are outer wall surfaces of the component. In this configuration, surface 42 is the first surface to receive the laser beam 92. It is also possible to use a mirror imaged configuration of the joint design whereby surfaces 42 and 72 are inner wall surfaces and surfaces 36 and 52 are outer wall surfaces. It is possible to weld in this mirror imaged configuration, but the

resulting component will be weaker since the laser 90 will be unable to reach any of the surfaces past surface 74. In the preferred embodiment, the surface that cannot be reached by the laser 90, i.e. the surface along ledge 32, is much shorter. In both configurations, the unwelded surfaces act as stress risers when these hollow components are subjected to internal pressure as in a burst test. In the preferred embodiment, the thickness of wall upon which the stress riser is acting is larger than in the mirror imaged configuration. Therefore, the component can withstand higher internal pressure before a crack propagates through the wall.

[41] Each of the disclosed embodiments also include a similar preferred geometry that achieves the taper-lock, i.e. achieves a configuration that forces and holds the first 28 and second 58 laser weld surfaces at the desired pressure levels for laser welding. The first laser weld surface 28 is a tapered surface that is defined by a first angle A1. The second laser weld surface 58 is a tapered surface that is defined by a second angle A2. Preferably, the first angle A1 is greater than the second angle A2.

[42] Also, the first 30 and second 60 taper locking surfaces are defined by the same taper angle A3. This taper angle A3 is preferably at least twice that of the first A1 and second A2 angles. In the preferred configuration, the first angle is at least fourteen (14) degrees, the second angle is at least twelve (12) degrees, and the taper locking angle is at least thirty-six (36) degrees. While this configuration is preferred, it should be understood that other similar geometric configurations could also be used.

[43] The subject invention provides several benefits over traditional laser welding systems. The taper locking feature allows the clamps 84, 86, which apply the clamping force CF, to be moved out of the direct path of the laser beam 92 in all configurations. Further, the finished laser weld joint 16 lies within the wall stock or wall extensions 22, 52 of the ~~components~~ shells 12, 14 and therefore is not exterior to the component walls, as when located on the flanges 80, 82 in traditional configurations. Further, the elimination of the flanges 80, 82 provides a smaller and lighter component ~~12, 14~~. Hence, in this configuration, burst testing (a known test that determines the strength of the weld) results in a tensile failure rather than a peel failure. As known, welds are stronger with respect to tensile failures than with respect to peel failures.

[48] Preferably, the weld joint 16 should be as nearly parallel to an upper surface of the first (transparent) ~~component~~ shell 12 as possible. This allows the laser beam 92 to be nearly perpendicular to both the upper surface and the surface to be welded and reduces loss of beam energy due to reflection. Further, this allows heating by the laser 90 to be symmetric about the center of the beam 92.